

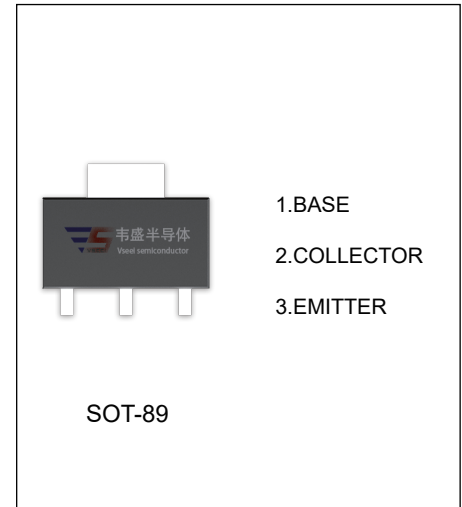
## 2SC4115 TRANSISTOR (NPN)

### FEATURES

- Low  $V_{CE(sat)}$ .  $V_{CE(sat)} = 0.2V$  (Typ.) ( $I_C / I_B = 2A / 0.1A$ )
- Excellent current gain characteristics.
- Complements to 2SA1585

### MAXIMUM RATINGS ( $T_a=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current -Continuous	3	A
$P_C$	Collector Power Dissipation	500	mW
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~150	$^\circ C$



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 50\mu A, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 50\mu A, I_C = 0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 30V, I_E = 0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 2V, I_C = 0.1A$	120		560	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.1A$			0.5	V
Transition frequency	$f_T$	$V_{CE} = 2V, I_C = 0.5A$ $F = 100MHz$	200	290		MHz

\*pulse test

### CLASSIFICATION OF $h_{FE}$

Rank	Q	R	S
Range	120-270	180-390	270-560
marking	4115Q	4115R	4115S